What is claimed is:

1. A method of inhibiting the occurrence of advanced endometrium maturation in a human female subject undergoing fertility enhancing treatment comprising

administering at least one 17α -fluoralkylated progesterone receptor antagonist to the female subject during the post-ovulatory phase of the endometrial cycle.

- 2. A method according to claim 1, wherein the 17α -fluoralkylated progesterone receptor antagonist is administered to the subject in a daily dosage amount of 0.1-2 mg per subject.
- 3. A method according to claim 2, wherein the fertility treatment comprises the administration to the subject of a follicle stimulating agent comprising follicle stimulating hormone.
- 4. A method according to claim 2, wherein the 17α -fluoralkylated progesterone receptor antagonist is administered in an amount of 0.1-2 mg per subject on a single day during the post-ovulatory phase of the endometrial cycle.
- 5. A method according to claim 2, wherein the 17α -fluoralkylated progesterone receptor antagonist is a compound of formula I:

$$\begin{array}{c|c}
R^1 & R^3 \\
\hline
St & R^2 \\
\hline
H & R^4
\end{array}$$

wherein

R¹ is methyl or ethyl,

 R^2 is $C_nF_mH_o$, wherein n is 1-6, preferably 2, 3, 4, 5 or 6, m > 1 and

m+o=2n+1,

R³ is a free, etherified or esterified hydroxy group,

R⁴ and R⁵ each is a hydrogen, or together form an additional bond or a methylene group,

St is a steroidal ABC-ring system of partial formula A, B or C

wherein

 R^6 is hydrogen, a straight-chain C_1 - C_4 alkyl group or branched C_3 - C_4 alkyl group or halogen,

 R^7 is hydrogen, a straight-chain $C_1\text{-}C_4$ alkyl group or a branched $C_3\text{-}C_4$ alkyl group, or

if St is a steroidal ABC-ring system A or B, in addition

R⁶ and R⁷ together can form an additional bond,

X is oxygen, hydroxyimino (=N-OH) or two hydrogen atoms,

R⁸ is Y or aryl that is optionally substituted in several places with a group Y, other than H,

 $Y \qquad \text{is hydrogen, halogen, -OH, -NO}_2, -N_3, -CN, -NR^{9a}R^{9b}, -NHSO_2R^9, -CO_2R^9, C_1-C_{10} \text{ alkyl, } C_1-C_{10} \text{ alkoxy, } C_1-C_{10} \text{ alkanoyloxy, benzoyloxy, } C_1-C_{10} \text{ alkanoyl, } C_1-C_{10} \text{ hydroxyalkyl or benzoyl,} \\$

 R^{9a} and R^{9b} are the same or different and each is hydrogen or C_1 - C_{10} alkyl, R^9 is hydrogen or C_1 - C_{10} alkyl,



and for $-NR^{9a}R^{9b}$ radicals, as well as their physiologically compatible salts with acids and for $-CO_2R^9$ radicals with R^9 being hydrogen, as well as their physiologically compatible salts with bases.

- 6. A method according to claim 4, wherein the 17α -fluoralkylated progesterone receptor antagonist is administered orally to the subject.
- 7. A method of achieving pregnancy in a human female subject comprising stimulating the ovaries of the subject by administering a follicle stimulating agent to the subject, wherein the agent comprises follicle stimulating hormone; removing eggs from the ovary of the stimulated subject; administering at least one 17α-fluoralkylated progesterone receptor antagonist to the subject in the post-ovulatory phase of the endometrial cycle; fertilizing at least one egg in vitro to obtain an embryo;

transferring the embryo into the uterus or fallopian tubes of the mammal.

- 8. A method according to claim 7, wherein the 17α -fluoralkylated progesterone receptor antagonist is administered to the subject in a daily dosage amount of 0.1-10 mg per subject
- 9. A method according to claim 8, wherein the 17α -fluoralkylated progesterone receptor antagonist is administered in an amount of 0.1-2 mg per subject on a single day during the post-ovulatory phase of the endometrial cycle.

10. A method according to claim 8, wherein the 17α -fluoralkylated progesterone receptor antagonist is a compound of formula I:

$$\begin{array}{c|c}
R^1 & R^3 \\
\hline
 & R^2 \\
 & R^5 \\
 & H & R^4
\end{array}$$

wherein

R¹ is methyl or ethyl,

 R^2 is $C_nF_mH_o$, wherein n is 1-6, preferably 2, 3, 4, 5 or 6, m > 1 and m+o=2n+1,

R³ is a free, etherified or esterified hydroxy group,

R⁴ and R⁵ each is a hydrogen, or together form an additional bond or a methylene group,

St is a steroidal ABC-ring system of partial formula A, B or C

wherein

 R^6 is hydrogen, a straight-chain C_1 - C_4 alkyl group or branched C_3 - C_4 alkyl group or halogen,

 R^7 is hydrogen, a straight-chain C_1 - C_4 alkyl group or a branched C_3 - C_4 alkyl group, or

if St is a steroidal ABC-ring system A or B, in addition R^6 and R^7 together can form an additional bond,

- X is oxygen, hydroxyimino (=N-OH) or two hydrogen atoms,
- R⁸ is Y or aryl that is optionally substituted in several places with a group Y, other than H,
- Y is hydrogen, halogen, -OH, -NO₂, -N₃, -CN, -NR^{9a}R^{9b}, -NHSO₂R⁹, -CO₂R⁹, C₁-C₁₀ alkyl, C₁-C₁₀ alkoxy, C₁-C₁₀ alkanoyloxy, benzoyloxy, C₁-C₁₀ alkanoyl, C₁-C₁₀ hydroxyalkyl or benzoyl,

 R^{9a} and R^{9b} are the same or different and each is hydrogen or C_1 - C_{10} alkyl, R^9 is hydrogen or C_1 - C_{10} alkyl,

and for $-NR^{9a}R^{9b}$ radicals, as well as their physiologically compatible salts with acids and for $-CO_2R^9$ radicals with R^9 being hydrogen, as well as their physiologically compatible salts with bases.

- 11. A method according to claim 9, wherein the 17α -fluoralkylated progesterone receptor antagonist is administered orally to the subject.
- 12. A method of inhibiting the occurrence of advanced endometrium maturation in a non-human female mammal undergoing fertility enhancement treatment to achieve pregnancy comprising

administering at least one 17α -fluoralkylated progesterone receptor antagonist to the mammal during the post-ovulatory phase of the endometrial cycle.

- 13. A method according to claim 12, wherein the 17α -fluoralkylated progesterone receptor antagonist is administered to the mammal in a daily dosage amount of 0.01-1 mg/kg.
- 14. A method according to claim 13, wherein the fertility treatment comprises the administration to the mammal of a follicle stimulating agent comprising follicle stimulating hormone.
- 15. A method according to claim 13, wherein the 17α-fluoralkylated progesterone receptor antagonist is administered to the mammal in an amount of

0.1-1 mg/kg on a single day during the post-ovulatory phase of the endometrial cycle.

16. A method according to claim 13, wherein the 17α -fluoralkylated progesterone receptor antagonist is a compound of formula I:

$$\begin{array}{c|c}
R^1 & R^3 \\
\hline
St & R^5 \\
\hline
H & R^4
\end{array}$$

wherein

R¹ is methyl or ethyl,

 R^2 is $C_n F_m H_o$, wherein n is 1-6, preferably 2, 3, 4, 5 or 6, m > 1 and m+o=2n+1,

R³ is a free, etherified or esterified hydroxy group,

 R^4 and R^5 each is a hydrogen, or together form an additional bond or a methylene group,

St is a steroidal ABC-ring system of partial formula A, B or C

wherein

 R^6 is hydrogen, a straight-chain C_1 - C_4 alkyl group or branched C_3 - C_4 alkyl group or halogen,

 R^7 is hydrogen, a straight-chain C_1 - C_4 alkyl group or a branched C_3 - C_4 alkyl group, or

if St is a steroidal ABC-ring system A or B, in addition R^6 and R^7 together can form an additional bond,

X is oxygen, hydroxyimino (=N-OH) or two hydrogen atoms,

R⁸ is Y or aryl that is optionally substituted in several places with a group Y, other than H,

Y is hydrogen, halogen, -OH, -NO₂, -N₃, -CN, -NR^{9a}R^{9b}, -NHSO₂R⁹, -CO₂R⁹, C₁-C₁₀ alkyl, C₁-C₁₀ alkoxy, C₁-C₁₀ alkanoyloxy, benzoyloxy, C₁-C₁₀ alkanoyl, C₁-C₁₀ hydroxyalkyl or benzoyl,

 R^{9a} and R^{9b} are the same or different and each is hydrogen or C_1 - C_{10} alkyl, R^9 is hydrogen or C_1 - C_{10} alkyl,

and for $-NR^{9a}R^{9b}$ radicals, as well as their physiologically compatible salts with acids and for $-CO_2R^9$ radicals with R^9 being hydrogen, as well as their physiologically compatible salts with bases.

17. A method of achieving pregnancy in a non-human mammal comprising stimulating the ovaries of the mammal by administering a follicle stimulating agent to the mammal, wherein the agent comprises follicle stimulating hormone; removing eggs from the ovary of the stimulated mammal;

administering at least one 17α-fluoralkylated progesterone receptor antagonist to the mammal in the post-ovulatory phase of the endometrial cycle; fertilizing at least one egg in vitro to obtain an embryo; transferring the embryo into the uterus or fallopian tubes of the mammal.

18. A method according to claim 17, wherein the 17α -fluoralkylated progesterone receptor antagonist is administered to the mammal in a daily dosage amount of 0.01-1 mg/kg.

- 19. A method according to claim 18, wherein the 17α -fluoralkylated progesterone receptor antagonist is administered to the mammal in an amount 0.1-1 mg/kg on a single day during the post-ovulatory phase of the endometrial cycle.
- 20. A method according to claim 18, wherein the 17α-fluoralkylated progesterone receptor antagonist is a compound of formula I:

$$\begin{array}{c|c}
R^1 & R^3 \\
\hline
St & R^2 \\
\hline
H & R^4
\end{array}$$

wherein

R¹ is methyl or ethyl,

 R^2 is $C_nF_mH_o$, wherein n is 1-6, preferably 2, 3, 4, 5 or 6, m > 1 and m+o=2n+1,

R³ is a free, etherified or esterified hydroxy group,

R⁴ and R⁵ each is a hydrogen, or together form an additional bond or a methylene group,

St is a steroidal ABC-ring system of partial formula A, B or C

wherein

 R^6 is hydrogen, a straight-chain C_1 - C_4 alkyl group or branched C_3 - C_4 alkyl group or halogen,



 R^7 is hydrogen, a straight-chain C_1 - C_4 alkyl group or a branched C_3 - C_4 alkyl group, or

if St is a steroidal ABC-ring system A or B, in addition

R⁶ and R⁷ together can form an additional bond,

X is oxygen, hydroxyimino (=N-OH) or two hydrogen atoms,

R⁸ is Y or aryl that is optionally substituted in several places with a group Y, other than H,

Y is hydrogen, halogen, -OH, -NO₂, -N₃, -CN, -NR^{9a}R^{9b}, -NHSO₂R⁹, -CO₂R⁹, C₁-C₁₀ alkyl, C₁-C₁₀ alkoxy, C₁-C₁₀ alkanoyloxy, benzoyloxy, C₁-C₁₀ alkanoyl, C₁-C₁₀ hydroxyalkyl or benzoyl,

 R^{9a} and R^{9b} are the same or different and each is hydrogen or C_1 - C_{10} alkyl, R^9 is hydrogen or C_1 - C_{10} alkyl,

and for $-NR^{9a}R^{9b}$ radicals, as well as their physiologically compatible salts with acids and for $-CO_2R^9$ radicals with R^9 being hydrogen, as well as their physiologically compatible salts with bases.

- 21. A non-human mammal which results from a pregnancy achieved by a process according to claim 13.
- 22. A non-human mammal which results from a pregnancy achieved by a process according to claim 18.
- 23. A method of inhibiting the occurrence of advanced endometrium maturation in a human female subject undergoing fertility enhancing treatment comprising

administering at least one compound of formula I to the subject, wherein formula I is

$$\begin{array}{c|c}
R^1 & R^3 \\
\hline
St & R^2 \\
\hline
H & R^4
\end{array}$$



wherein

R¹ is methyl or ethyl,

 R^2 is $C_nF_mH_o$, wherein n is 1-6, preferably 2, 3, 4, 5 or 6, m > 1 and m+o=2n+1,

R³ is a free, etherified or esterified hydroxy group,

 R^4 and R^5 each is a hydrogen, or together form an additional bond or a methylene group,

St is a steroidal ABC-ring system of partial formula A, B or C

wherein

 R^6 is hydrogen, a straight-chain C_1 - C_4 alkyl group or branched C_3 - C_4 alkyl group or halogen,

 R^7 is hydrogen, a straight-chain C_1 - C_4 alkyl group or a branched C_3 - C_4 alkyl group, or

if St is a steroidal ABC-ring system A or B, in addition

 \mathbf{R}^6 and \mathbf{R}^7 together can form an additional bond,

X is oxygen, hydroxyimino (=N-OH) or two hydrogen atoms,

 R^8 is Y or aryl that is optionally substituted in several places with a group Y, other than H,

Y is hydrogen, halogen, -OH, -NO $_2$, -N $_3$, -CN, -NR 9a R 9b , -NHSO $_2$ R 9 , -CO $_2$ R 9 , C $_1$ -C $_{10}$ alkyl, C $_1$ -C $_{10}$ alkoxy, C $_1$ -C $_{10}$ alkanoyloxy, benzoyloxy, C $_1$ -C $_{10}$ alkanoyl, C $_1$ -C $_{10}$ hydroxyalkyl or benzoyl,

 R^{9a} and R^{9b} are the same or different and each is hydrogen or C_1 - C_{10} alkyl,



physiologically compatible salts with bases.

 R^9 is hydrogen or C_1 - C_{10} alkyl, and for -NR^{9a}R^{9b} radicals, as well as their physiologically compatible salts with acids and for -CO₂R⁹ radicals with R⁹ being hydrogen, as well as their

24. A method of achieving pregnancy in a human female subject comprising

stimulating the ovaries of the subject by administering a follicle stimulating agent to the subject, wherein the agent comprises follicle stimulating hormone;

removing eggs from the ovary of the stimulated subject;

administering at least one compound of formula I to the subject in the postovulatory phase of the endometrial cycle;

fertilizing at least one egg in vitro to obtain an embryo;

transferring the embryo into the uterus or fallopian tubes of the mammal, wherein formula I is

$$\begin{array}{c|c}
R^1 & R^3 \\
\hline
St & R^2 \\
\hline
H & R^4
\end{array}$$

wherein

R¹ is methyl or ethyl,

 R^2 is $C_nF_mH_o$, wherein n is 1-6, preferably 2, 3, 4, 5 or 6, m > 1 and m+o=2n+1,

R³ is a free, etherified or esterified hydroxy group,

 R^4 and R^5 each is a hydrogen, or together form an additional bond or a methylene group,

St is a steroidal ABC-ring system of partial formula A, B or C

wherein

 R^6 is hydrogen, a straight-chain C_1 - C_4 alkyl group or branched C_3 - C_4 alkyl group or halogen,

 R^7 is hydrogen, a straight-chain C_1 - C_4 alkyl group or a branched C_3 - C_4 alkyl group, or

. if St is a steroidal ABC-ring system A or B, in addition R⁶ and R⁷ together can form an additional bond,

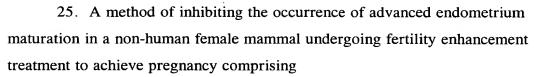
X is oxygen, hydroxyimino (=N-OH) or two hydrogen atoms,

R⁸ is Y or aryl that is optionally substituted in several places with a group Y, other than H,

 $Y \qquad \text{is hydrogen, halogen, -OH, -NO}_2, \text{ -N}_3, \text{ -CN, -NR}^{9a}R^{9b}, \text{ -NHSO}_2R^9, \text{ -CO}_2R^9, C_1\text{-C}_{10} \text{ alkyl, } C_1\text{-C}_{10} \text{ alkoxy, } C_1\text{-C}_{10} \text{ alkanoyloxy, benzoyloxy, } C_1\text{-C}_{10} \text{ alkanoyl, } C_1\text{-C}_{10} \text{ hydroxyalkyl or benzoyl,} \\$

 R^{9a} and R^{9b} are the same or different and each is hydrogen or C_1 - C_{10} alkyl, R^9 is hydrogen or C_1 - C_{10} alkyl,

and for $-NR^{9a}R^{9b}$ radicals, as well as their physiologically compatible salts with acids and for $-CO_2R^9$ radicals with R^9 being hydrogen, as well as their physiologically compatible salts with bases.



administering at least one compound according to formula I to the mammal, wherein formula I is

wherein

R¹ is methyl or ethyl,

 R^2 is $C_n F_m H_o$, wherein n is 1-6, preferably 2, 3, 4, 5 or 6, m > 1 and m+o=2n+1,

R³ is a free, etherified or esterified hydroxy group,

 R^4 and R^5 each is a hydrogen, or together form an additional bond or a methylene group,

St is a steroidal ABC-ring system of partial formula A, B or C



 R^6 is hydrogen, a straight-chain C_1 - C_4 alkyl group or branched C_3 - C_4 alkyl group or halogen,

 R^7 is hydrogen, a straight-chain C_1 - C_4 alkyl group or a branched C_3 - C_4 alkyl group, or

if St is a steroidal ABC-ring system A or B, in addition

R⁶ and R⁷ together can form an additional bond,

X is oxygen, hydroxyimino (=N-OH) or two hydrogen atoms,

R⁸ is Y or aryl that is optionally substituted in several places with a group Y, other than H,

Y is hydrogen, halogen, -OH, -NO₂, -N₃, -CN, -NR^{9a}R^{9b}, -NHSO₂R⁹, -CO₂R⁹, C₁-C₁₀ alkyl, C₁-C₁₀ alkoxy, C₁-C₁₀ alkanoyloxy, benzoyloxy, C₁-C₁₀ alkanoyl, C₁-C₁₀ hydroxyalkyl or benzoyl,

 R^{9a} and R^{9b} are the same or different and each is hydrogen or C_1 - C_{10} alkyl, R^9 is hydrogen or C_1 - C_{10} alkyl,

and for $-NR^{9a}R^{9b}$ radicals, as well as their physiologically compatible salts with acids and for $-CO_2R^9$ radicals with R^9 being hydrogen, as well as their physiologically compatible salts with bases.

26. A method of achieving pregnancy in a non-human mammal comprising stimulating the ovaries of the mammal by administering a follicle stimulating agent to the mammal, wherein the agent comprises follicle stimulating hormone;

removing eggs from the ovary of the stimulated mammal;

administering at least one compound of formula I to the mammal in the postovulatory phase of the endometrial cycle;

fertilizing at least one egg in vitro to obtain an embryo;

transferring the embryo into the uterus or fallopian tubes of the mammal,

I

(

wherein

R¹ is methyl or ethyl,

 R^2 is $C_nF_mH_o$, wherein n is 1-6, preferably 2, 3, 4, 5 or 6, m > 1 and m+o=2n+1,

R³ is a free, etherified or esterified hydroxy group,

R⁴ and R⁵ each is a hydrogen, or together form an additional bond or a methylene group,

St is a steroidal ABC-ring system of partial formula A, B or C

wherein

 R^6 is hydrogen, a straight-chain C_1 - C_4 alkyl group or branched C_3 - C_4 alkyl group or halogen,

 R^7 is hydrogen, a straight-chain C_1 - C_4 alkyl group or a branched C_3 - C_4 alkyl group, or

if St is a steroidal ABC-ring system A or B, in addition

 R^6 and R^7 together can form an additional bond,

X is oxygen, hydroxyimino (=N-OH) or two hydrogen atoms,

R⁸ is Y or aryl that is optionally substituted in several places with a group Y, other than H,

Y is hydrogen, halogen, -OH, -NO₂, -N₃, -CN, -NR^{9a}R^{9b}, -NHSO₂R⁹, -CO₂R⁹, C₁-C₁₀ alkyl, C₁-C₁₀ alkoxy, C₁-C₁₀ alkanoyloxy, benzoyloxy, C₁-C₁₀ alkanoyl, C₁-C₁₀ hydroxyalkyl or benzoyl,

 R^{9a} and R^{9b} are the same or different and each is hydrogen or C_1 - C_{10} alkyl,



 R^9 is hydrogen or C_1 - C_{10} alkyl,

and for $-NR^{9a}R^{9b}$ radicals, as well as their physiologically compatible salts with acids and for $-CO_2R^9$ radicals with R^9 being hydrogen, as well as their physiologically compatible salts with bases.

27. A method of inhibiting the occurrence of advanced endometrium maturation in a human female subject undergoing fertility enhancing treatment comprising

administering at least one 17\alpha-fluoralkylated progesterone receptor antagonist to the female subject during the post-ovulatory phase of the endometrial cycle.

28. A method of inhibiting the occurrence of advanced endometrium maturation in a human female subject undergoing fertility enhancing treatment comprising

administering at least one 17α -fluoralkylated progesterone receptor antagonist to the female subject during the post-ovulatory phase of the endometrial cycle after said fertility enhancing treatment.

29. A method of inhibiting the occurrence of advanced endometrium maturation in a non-human female mammal undergoing fertility enhancement treatment to achieve pregnancy comprising

administering at least one 17α -fluoralkylated progesterone receptor antagonist to the mammal during the post-ovulatory phase of the endometrial cycle after said fertility enhancing treatment.